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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/625,094

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EXAMINER

AZEMAR, GUERSSY

ART UNIT

PAPER NUMBER

2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/625,094	KIM ET AL.	
	Examiner	Art Unit	
	Guerssy Azemar	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 13, 15-19 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13, 15-19 and 21-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/03/06; 12/27/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 23 depends on claim 20, which has been canceled. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4, 5, 7-9, 13, 15, 18, 19, 21, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Kawate et al. (20020030865) and Allan et al. (5,946,313).

(1) With respect to claim 1:

As shown in figure 1, the admitted prior art teaches an apparatus for a GE-PON (Gigabit Ethernet Passive Optical Network) system which includes an OLT (Optical Line Terminal), a splitter connected to the OLT via a working path line composed of only one

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optical fiber, and a plurality of ONUs (Optical Network Units) connected to the splitter via individual optical fibers, said apparatus comprising:

said working path line located between the OLT and the splitter to perform two-way communication (fiber connecting OLT to splitter);

an Ethernet OAM frame (figure 2).

However, the admitted prior art does not teach a redundant path line, which is composed of only one optical fiber, located between the OLT and the splitter to perform two-way communication;

a switching block located in said OLT for performing either automatic or compulsory switching operation, said automatic switching operation by means of using a notification field for indicating asynchronous information contained in Ethernet OAM frame and said compulsory switching operation by means of manual manipulation by a user.

ONU means for detecting a transmission loss of the working path line upon receiving a signal transmitted from the OLT to one ONU among the ONUs, and for transmitting switching information of the working path line via the working path line; and

an OLT for receiving the switching information via the working path line, and for transmitting data to the ONU means via the redundant path line according to the received switching information.

Kawate et al. teach a redundant path line, which is composed of only one optical fiber, located between the OLT and the splitter to perform two-way communication (second optical fiber in figure 1);

a switching block (71, 72, 73 in figure 2) located in said OLT (51 in figure 2) for performing either automatic or compulsory switching operation (page 4, paragraph 0084, with the control of selection controller block 72 designates route for supplying traffic on a working line or a standby line).

ONU means for detecting a transmission loss of the working path line upon receiving a signal transmitted from the OLT to one ONU among the ONUs (page 4, paragraph 0068 teaches the control example carried out when failure is detected in the ONU, which indirectly teaches that failure are detected in the ONU), and for transmitting switching information of the working path line via the working path line (page 3, paragraph 0043, OLT detects system switching information from ONU); and

an OLT for receiving the switching information via the working path line, and for transmitting data to the ONU means via the redundant path line according to the received switching information (page 3, paragraph 0043, OLT receives the switching information and the OLT would have to transmit via the redundant path since the working path has failed).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the redundant path and the switch as taught by Kawate et al. in the network taught by the admitted prior art in order to provide a fail-safe transmission.

Allan et al. teach a notification field for indicating asynchronous information contained in an Ethernet frame (column 3, line 47 teaches the asynchronous cells in an Ethernet frame, and figure 1C teaches Ethernet frame which contains a OUI address an identifier for the ATM traffic, column 6, line 63).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifier taught by Allan et al. in the Ethernet OAM frame taught in the admitted prior art in order to allow the OLT to perform the proper switching operation by providing it the control information.

(2) With respect to claim 2:

The admitted prior teaches all of the subject matter as described above except for the apparatus wherein said working and redundant path lines are disposed in a 1+1 configuration.

Kawate et al. teach the apparatus wherein said working and redundant path lines are disposed in a 1+1 configuration (page 8, paragraph 0155).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use 1+1 configuration as taught by Kawate et al. in the network taught by the admitted prior art because the signal is always available on both paths, hence the switching is faster.

(3) With respect to claim 4:

The admitted prior art teach a GE-PON apparatus (figure 1) and an Ethernet OAM frame (figure 2).

However, the admitted prior art does not teach a 2xN splitter;

an OLT being connected to the 2xN splitter via a first path line or a second path line and including a switching unit for switching the first path line or the second path line upon receiving a predetermined control signal, wherein said switching unit configured

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for using a notification field for indicating asynchronous information contained in an Ethernet OAM frame; and

an ONU for creating a switching request according to a signal environment, and transmitting the generated switching request to the OLT.

Kawate et al. teach an OLT being connected to the 2xN splitter (53 in figure 1) via a first path line or a second path line (first and second optical fiber in figure 1) and including a switching unit for switching the first path line or the second path line upon receiving a predetermined control signal (71, 72, 73 in figure 2).

an ONU for creating a switching request according to a signal environment, and transmitting the generated switching request to the OLT (page 3, paragraph 0043).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the redundant path and the switch as taught by Kawate et al. in the network taught by the admitted prior art in order to provide a fail-safe transmission.

Allan et al. teach a notification field for indicating asynchronous information contained in an Ethernet frame (column 3, line 47 teaches the asynchronous cells in an Ethernet frame, and figure 1C teaches Ethernet frame which contains a OUI address an identifier for ATM traffic, column 6, line 63).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifier taught by Allan et al. in the Ethernet OAM frame taught in the admitted prior art in order to allow the OLT to perform the proper switching operation by providing it the control information.

(4) With respect to claims 5:

The admitted prior art teaches the Ethernet OAM frame wherein said notification field receives information in a data frame using a flag bit (FLAG in figure 2) adapted to transmit information of said signaling Ethernet OAM frame between said OLT and said ONU (shown in figure 1).

However, the admitted prior art does not teach transmitting asynchronous information of said Ethernet OAM frame and said notification field receiving switching information.

Allan et al. teach asynchronous information on an Ethernet frame (abstract ATM cells into an Ethernet frame).

Therefore it would have been obvious to one of ordinary skill at the time of the invention to use the asynchronous information taught by Allan et al. on the Ethernet OAM frame taught by the admitted prior art in the order to efficiently use the Ethernet frame since the ATM routing information is embedded in the Ethernet MAC addressing field (column 5, line 35-37).

Although the notification field is not used for switching information, it is well known in the art to carry switching information on an OAM frame, since switching is handled on an OAM level.

(5) With respect to claim 7:

The admitted prior art teaches all of the subject matter as described above except for the apparatus, wherein either one of the first path line and the second path line of the 2xN splitter is connected to the OLT and is adapted as a working path line, and the other one is not connected to the OLT and is adapted as a protection path line.

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Kawate et al. teach either one of the first path line and the second path line of the 2xN splitter (53 in figure 1) is connected to the OLT and is adapted as a working path line, and the other one is not connected to the OLT and is adapted as a protection path line (first optical fiber as the working fiber and the second optical fiber as the standby fiber; see figure 1).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the protection path as taught by Kawate et al. in the network taught by the admitted prior art in order to provide a fail-safe system.

(6) With respect to claim 8:

The admitted prior art teaches all of the subject matter as described above except for the apparatus, wherein the splitter has a first input terminal and a second input terminal, and wherein the switching unit of the OLT disconnects the OLT from the splitter in switching the first input terminal to re-adapt the first input terminal from the working path line to the protection path line, or connects the OLT to the splitter in switching the second input terminal to re-adapted the second input terminal from the protection path line to the working path line.

Kawate et al. teach the splitter has a first input terminal and a second input terminal (first and second optical fiber in figure 1), and wherein the switching unit of the OLT disconnects the OLT from the splitter in switching the first input terminal to re-adapt the first input terminal from the working path line to the protection path line (71, 72, 73 in figure 2).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the protection path as taught by Kawate et al. in the network taught by the admitted prior art in order to provide a fail-safe system.

(7) With respect to claim 9:

The admitted prior art teaches all of the subject matter as described above except for the apparatus, wherein the switching unit of the OLT disconnects the OLT from the splitter in switching the second path line having been adapted as the working path line to the protection path line, or connects the OLT to the splitter in switching the first path line having been adapted as the protection path line to the working path line.

Kawate et al. teach apparatus, wherein the switching unit of the OLT (71, 72, 73 in figure 2) disconnects the OLT from the splitter in switching the second path line having been adapted as the working path line to the protection path line, or connects the OLT to the splitter in switching the first path line having been adapted as the protection path line to the working path line (page 3, paragraph 0043 teaches the controlling system switching from the working side to the standby side, therefore in the system taught in figure 1, disconnects the failed path and connects the working one).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the protection scheme taught by Kawate et al. in the system taught by the admitted prior art in order to provide fail-safe network.

(8) With respect to claim 13:

The admitted prior art teaches all of the subject matter as described above except for the apparatus wherein said creating occurs in response to at least one of a signal degradation, a signal failure, and a power margin.

Kawate et al. teach said creating occurs in response to at least one of signal degradation, a signal failure, and a power margin (page 2, paragraph 0023, SF "signal fail").

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to send a switching request in response to a signal fail message as taught by Kawate et al. in the network taught by the admitted prior art in order to allow the system to switch to a safe path provided by standby line in the network.

(9) With respect to claim 15:

The admitted prior art teaches an Ethernet OAM frame for GE-PON system (frame of figure 2), and operation field contained in the Ethernet OAM frame (OPCODE in figure 2), a data field having information generated by an ONU to request operation (DATA in figure 2).

However the admitted prior art does not teach a system having two path lines located between a splitter and an OLT in which only one path line is in a connection state to serve as a working path line, and the other one-path line is in a no-connection state to serve as a protection path line.

a switching block located in said OLT for performing a switching operation.

a notification field for indicating asynchronous information.

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Kawate et al. teach a system having two path lines located between a splitter and an OLT in which only one path line is in a connection state to serve as a working path line, and the other one-path line is in a no-connection state to serve as a protection path line (first optical fiber and second optical fiber in figure 1, second optical fiber is on a standby mode).

a switching block located in said OLT for performing a switching operation (71, 72, 73 in figure 2).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the protection mechanism taught by Kawate et al. in the network taught by the admitted prior art in order to provide fail-safe system.

Allan et al. teaches a notification field for indicating asynchronous information (column 3, line 47 teaches the asynchronous cells in an Ethernet frame, and figure 1C teaches Ethernet frame which contains a OUI address an identifier, column 6, line 63).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifier taught by Allan et al. in the Ethernet OAM frame taught in the admitted prior art in order to allow the OLT to perform the proper switching operation by providing it the proper control information.

(10) With respect to claim 18:

The admitted prior art teaches a GE-PON system, an OLT, a splitter and ONUs (see figure 1).

However, the admitted prior art does not teach providing a 2xN splitter;

providing an OLT being connected to the 2xN splitter via a first path line or a second path line and having a switching unit for switching the first path line or the second path line upon receiving a predetermined control signal; and

providing an ONU (Optical Network Unit), said method comprising the steps of:

a) providing a means for of the ONU to check the signal environment;
b) providing a means for of the ONU; to generate a switching request according to the checked result and transmitting a packet containing the switching request to the OLT;

c) providing a means for the OLT to receive the packet and detecting the switching request; and

d) providing a switching block located in the OLT for performing a switching operation and upon receiving the switching request from an ONU to; switch a current working path line to a protection path line and to switch a current protection path line to the working path line, whereas said automatic switching operation is by means of using a notification field for indicating asynchronous information, contained in an Ethernet OAM frame.

Kawate et al. teach a 2xN splitter (53 in figure 1);

providing an OLT being connected to the 2xN splitter via a first path line or a second path line (first optical fiber and second optical fiber in figure 1) and having a switching unit for switching the first path line or the second path line upon receiving a predetermined control signal (71, 72, 73 in figure 2); and

providing an ONU (52-1 in figure 1), said method comprising the steps of:

a) providing a means for of the ONU to check the signal environment (paragraph 0068 teaches the ability for failure to be detected at ONU, therefore it is inherent that it has means to check for signal environment);

b) providing a means for of the ONU; to generate a switching request according to the checked result and transmitting a packet containing the switching request to the OLT (page 3, paragraph 0043);

c) providing a means for the OLT to receive the packet and detecting the switching request (monitoring means in the OLT in paragraph 0043); and

d) providing a switching block located in the OLT for performing a switching operation and upon receiving the switching request from an ONU to; switch a current working path line to a protection path line and to switch a current protection path line to the working path line (page 3, paragraph 0044).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the protection system taught by Kawate et al. in the network taught by the admitted prior art in order to provide fail-safe network.

Allan et al. teaches a notification field for indicating asynchronous information (column 3, line 47 teaches the asynchronous cells in an Ethernet frame, and figure 1C teaches Ethernet frame which contains a OUI address an identifier for the ATM traffic, column 6, line 63).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifier taught by Allan et al. in the Ethernet OAM frame

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taught in the admitted prior art in order to allow the OLT to perform the proper switching operation by providing it the control information.

(11) With respect to claims 19, 21:

The admitted prior art teaches a notification field in said Ethernet OAM frame receives information in a data frame using flag bit and OP code (taught in the frame of figure 2) that are adapted to transmit information between said OLT and said ONUs (seen in figure 1).

However, the admitted prior art does not teach an Ethernet OAM frame receiving switching information and transmitting asynchronous information.

Allan et al. teaches an Ethernet frame receiving switching information and transmitting asynchronous information (ATM OUI is identifies ATM traffic on Ethernet frame, see abstract).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the Ethernet frame taught by Allan et al. in the system taught by the admitted prior art in order to perform the proper switching operation by providing it the control information.

(12) With respect to claim 25:

The admitted prior art teaches the Ethernet OAM frame for GE-PON system wherein the operation field is composed of one octet that consists of hexadecimal representation of a number (page 1, paragraph 0007).

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Although the admitted prior art does not teach the operation field indicated by reference character EN, it would have been obvious to one of ordinary skill in the art at the time of the invention to indicate the field with any reference character.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art and Kawate et al. (20020030865) and Allan et al. (5,946,313) as applied to claim 1 above, and further in view of Zettinger et al. (20040085895).

Kawate et al. teach the apparatus wherein the splitter is a 2xN splitter (53 in figure 1).

However, the admitted prior art and Kawate et al. and Allan et al. do not teach a switching function is performed using the switching within a prescribed time of 50ms.

Zettinger et al. teach a switching function is performed using the switching within a prescribed time of 50ms (page 1, paragraph 0006).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the switch taught by Zettinger et al. in the protection system taught by the admitted prior art and kawate et al. because it provides the system with flexibility to perform Linear Automatic Protection Switching, UPSR, BLSR protection switching and bridge/substitute operations without burdening the central switch fabric with unnecessary or redundant traffic.

7. Claims 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art and Kawate et al. (20020030865) and Allan et al. (5,946,313) as applied to claim 1 above, and further in view of Claseman (7,177,325).

(1) With respect to claim 16:

The admitted prior art teaches the OAM frame for GE-PON system further comprising a flag field (frame of figure 2).

However the admitted prior art does not teach an Nth bit that is adapted to perform an alarm function wherein the Nth bit indicates the existence of a predetermined condition for requesting the switching operation.

Claseman teaches the OAM frame that includes alarms such as power failure (column 4, lines 1-3, 8).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention use the alarm functions taught by Claseman in the OAM frame taught by the admitted prior art in order to warn the network of any failure.

Although Claseman does not teach the Nth bit to indicate the existence of a predetermined condition for requesting the switching operation, it is well known in the art to use a bit to indicate the alarm condition.

(2) With respect to claim 17:

The admitted prior art teaches the OAM frame further comprising an operation code for event notification (OPCODE in figure 2).

However, the admitted prior art does not teach a predetermined value indicating asynchronous information.

Allan et al. teach a predetermined value indicating asynchronous information (based on the abstract ATM OUI identifies the frames carrying ATM traffic).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the ATM OUI as taught by Allan et al. in the frame taught by the

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admitted prior art in order to perform the proper switching operation by providing it the control information.

(3) With respect to claims 22, 23:

The admitted prior art and Kawate et al. and Allan et al. teach all of the subject matter as described above except for an alarm field is provided for detecting either a signal degradation or signal failure and is implemented by an Alarm Indication (AI) bit corresponding to the nth bit contained in the flag bit.

Claseman teaches an alarm field is provided for detecting either a signal degradation or signal failure (column 4, lines 1-3, 7).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the alarm field as taught by Claseman in the network taught by the admitted prior art in order to notify the system of any failure.

Although the alarm field taught by Claseman is not implemented by an alarm indication bit AI, one skilled in the art would know that the alarm indication bit could be represented by any symbol. It also obvious as a matter of design choice use an nth bit encoded as a 1 or a 0 so the alarm could be recognized by the OLT, since the bit can be either a 1 or a 0.

8. Claim 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art and Kawate et al. (20020030865) and Allan et al. (5,946,313) as applied to claim 1 above, and further in view of Isaksson et al. (6,160,820).

The admitted prior art and Kawate et al. and Allan et al. teach all of the subject matter as described above except for the data field includes:

- a temperature field (TE);
- a error rate field (ER);
- a power/voltage field (PV);
- a protection switching field (PS);

However, Isaksson et al. teach a frame with a number of information fields including bit error rate, power loss, high temperature (column 7, lines 62, 65).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to the different fields taught by Isaksson et al. in the network taught by the admitted prior art in order to monitor the system and alarm the OLT if any fault should occur.

Although the frame does not include a protection-switching field, it is well known in the art to include a protection field in order to provide a fail-safe system.

Allowable Subject Matter

9. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guerssy Azemar whose telephone number is (571) 270-1076. The examiner can normally be reached on Mon-Fri (every other Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone


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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Guerssy Azemar

02/15/ 2007



KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER

